Labour Market in an Era of Adjustment: A Study of Thailand

Thailand Development Research Institute Foundation

LABOUR MARKET IN AN ERA OF ADJUSTMENT: A STUDY OF THAILAND

by

Chalongphob Sussangkarn
Thailand Development Research Institute

May, 1990

Paper prepared for the Workshop on "Labour Market in and Era of Adjustment." Warwick University, May 22-25.

TABLE OF CONTENTS

LABOUR MARKET IN AN ERA OF ADJUSTMENT: A STUDY OF THAILAND

1. INTRODUCTION

Over the last 20-30 years, Thailand has been able to achieve a satisfactory pace of economic development. This has come about in spite of several major shocks in the world economy, and structural changes in world trade and exchange rate systems. Through out this period, adjustment problems associated with short-term macroeconomic management and external resource gap have been relatively mild compared to the experiences in many other countries. Though the chronic current account deficits and the external debt situation became an important focus of policy concerns during the early to mid 1980's, the on-going boom in manufactured exports, starting around 1986, has diluted this concern substantially. The country is now being talked about as the leader of the next wave of the Newly Industrialized Countries (NIC's).

While over all macroeconomic growth has been good, there are important structural adjustment problems in Thailand concerning sectorial and regional balance, and income distribution. Over the last two decades, the disparities between agriculture and non-agriculture, between regions, and between income groups, have been widening quite noticeably. While industrialization is now proceeding very rapidly and the share of agriculture in GDP is only around 16%, more than 60% of the labour force is still primarily engaged in agriculture. Most of the dynamic and successful export industries are located in and around the capital city, Bangkok, which is highly developed and is about 20 times larger than the next largest city (Chiang Mai). The key question for the future is how to maintain the pace of economic growth while ensuring a more balanced development, with the benefits from development spreading more evenly among the population.

In addition, with current rapid growth of industries and services, the composition of demand for labor is changing towards the more highly skilled labor. Currently, there are already shortages of scientific and technical manpower at the higher level. In the future, it is expected that the labor market for all types of labor with middle to high levels of education will also get tight. This will create another structural imbalance, one related to labor of different skill types. This may have an adverse impact on the competitiveness of Thailand in foreign trade, as well as implications for the strive to achieve a better distribution of income in the future.

The nature and functioning of the labour markets are clearly related to the above problems of structural imbalance. Changes in the structure of production lead to changes in the composition of demand for labour; by sector, by location, by skill types. Lags in adjustment in the labour market, or rigidities, will lead to structural imbalance in the structure of employment, which may reinforce other imbalances.

Subsequent sections of the study will describe and analyze in detailed the structural adjustments problems in Thailand in relation to the structure and functioning of the labour markets.

2. MACROECONOMIC GROWTH AND EXTERNAL BALANCE

Table 1 shows the rates of growth of real GDP from 1960 to 1989. Between 1960 and 1980, the average rate of real GDP growth was above 7%, which must be regarded as very satisfactory. breaking down

TABLE 1
GROWTH OF REAL GDP AND REAL PER CAPITA GNP
(1950-1988)

YEAR	REAL GDP	AGRIC	INDUSTRY	SERVICE	REAL PER CAPITA GNP
60-65	7.2%	4.8%	11.5%	7.2%	---
65-70	8.6%	6.0%	10.4%	9.5%	---
70-75	5.6%	3.8%	7.3%	5.6%	2.9%
75-80	7.9%	4.0%	10.6%	8.2%	5.3%
80-85	5.6%	4.9%	5.0%	6.3%	3.5%
86	4.5%	0.2%	7.1%	4.6%	2.6%
87	8.4%	-2.0%	12.0%	10.1%	6.5%
88	11.0%	8.6%	12.8%	10.7%	9.1%
89	10.0	---	---	---	---

Source: NESDB, National Income of Thailand, various issues.
Note: Figures from 1970 are based on
the New Series of National Accounts.

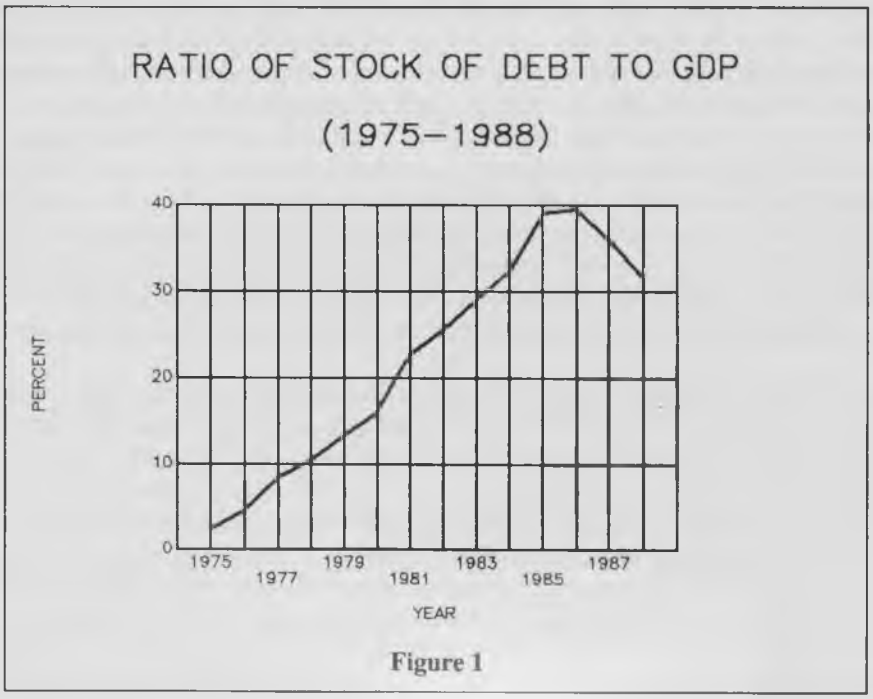


Figure 1

the period from 1960 to 1985 into five year intervals, it can be seen that growth was lowest in the periods in the immediate aftermath of the two oil shocks; 1970-75 and 1980-85. However, the 5.6% average growth achieved during these periods is very high when compared to the experiences of other countries. The impact of the first oil shock was cushioned by a boom in commodity prices during the same period. This helped to increase farm income, and improved the poverty situation considerably.[1] In contrast, after the second oil shock, all the main agricultural commodities of Thailand suffered a declining price trend. While Thailand still maintained a satisfactory rate of growth, the impact on agricultural incomes was very severe, leading to significant increases in poverty incidence. However, after 1986, the economy began a period of very rapid growth. Driven on by fast growth of manufactured exports (currently averaging 30-40% per annum), as well as tourism, economic growth reached 11% in 1988, was about 10% last year, and is likely to be at the double digit level again this year.

As with most LDC's, Thailand has usually experiences trade and current account deficit during the course of its development. In 1975, the ratio of the stock of debt to GDP was insignificant at 2.3%. Since 1975, however, this ratio rose rapidly. The ratio jumped to 16.1% of GDP in 1980, and to 39.0% of GDP in 1985 (See Figure 1). After the second oil shock, as a result of the recession in the world economy and declining agricultural commodity prices, the ratio of debt to GDP increased particularly rapidly, and also from a fairly base. In the early to mid-1980's, this was an issue of major concern to the government.

During the period after the second oil shock, the Thai government, both at its own initiative and also with assistance from the IMF and the World Bank, carried out various structural adjustment policies in order to control the external imbalance and associated foreign debt problems.[2] There were some restructuring of taxes, particularly the progressive reduction and finally elimination of the export tax on rice. Attempts were made to control public expenditures, and major policy along this line which had important consequences on the employment situation was the ceiling on government employment growth to 2% per annum, starting around 1983. This significantly affected the employment prospects of the better educated workers, who are predominantly employed by the public sector. However, the policies that were politically the most difficult to put through were probably the two devaluations, in 1981 and 1984. In 1981, the Baht was devalued from about 20.5/dollar to 23/dollar, and in 1984 a further devaluation took the rate to about 27/dollar. In both cases, the government nearly fell. In contrast, there were hardly any political concerns after 1986 when the baht was tied mostly to the US dollar as the dollar depreciated substantially relative to the yen and other major European currencies, which meant substantial effective depreciation of the baht with respect to average currency of Thailand's trading partners. These devaluations and depreciation of the baht were in fact quite substantial departures from the exchange rate policies that had been followed for a long time. As can be seen in Figure 2, the baht/dollar exchange rate had moved very little in the thirty years between 1950 and 1980.

While the various adjustment policies did not keep the ratio of foreign to GDP from rising, they nevertheless kept the problem from getting out of hand. This left Thailand in a good position to take advantage of changes that occurred in the world economic environment starting around 1986. Partly because of the exchange rate adjustments, partly because of the sharp decline in oil prices in 1986, and also partly because of the transition of the current Asian NIC's (South Korea, Taiwan, Hong Kong and Singapore) to more skilled and technologically intensive export products, the growth of the Thai economy accelerated significantly after 1986. The growth was mainly driven on by sharp increases in manufactured exports, which started to grow at a rate of about 30-40% per annum since 1986. These exports are very diverse covering such products as processed food, textiles, shoes, gems and jewellery, artificial flowers, integrated circuits, toys, and steel pipes. Basically, these products are of the low to semi-skilled types, and are the items through which the current NIC's had previous

---

1. See below.

2. For discussions and details of the various structural adjustment policies that were carried out during this period see Sahasakul, Thongpakde and Kraisoraphong [1989].

achieved their success. At the same time, however, Thailand still remains a major player in agricultural exports. She is the largest exporter of rice and cassava in the world, and ranks among the top five to ten in exports of rubber, sugarcane, maize and fisheries.

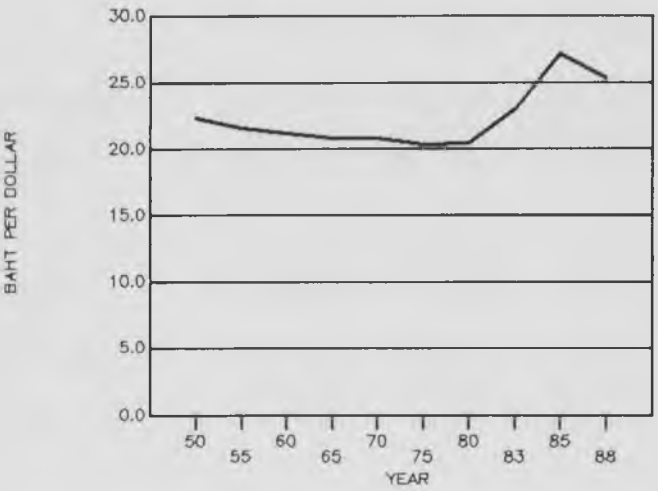


Figure 2

The boom in exports led to a downturn in the ratio of debt to GDP, which declined from about 39% in 1986 to only about 32% in 1988 (Figure 1). While currently, the external resource gap is starting to widen again in absolute terms, it remains manageable thanks partly to the huge inflow of foreign direct investment into the country. The key macroeconomic issue has shifted more to the question of how to manage the extremely rapid industrial and urban growth.

3. STRUCTURAL IMBALANCE AND ADJUSTMENT

Although Thailand has been able to achieve a very satisfactory pace of economic growth over the past two to three decades, and short-run adjustment problems have proved to be relatively minor, there are nevertheless important problems concerning sectorial and locational imbalance and income distribution. Disparities between sectors of productions, between regions, and between income groups have been widening.

The importance of agriculture in GDP has continually been on the decline. In 1960, the share of agriculture in GDP was about 40%. This declined to 31.5% in 1975, and between 1975 and 1986, the share fell by almost half to about 16.7% (see Table 2). With the declining importance of agriculture in GDP, it is not surprising that the share of employment in agriculture has also been declining. However, the decline in the share of employment in agriculture has been at a much slower pace than that for the share of agriculture in value added. While the share of agriculture in GDP nearly halved between 1975 and 1986, the share of employment in agricultural[3] only fell from 73% to 67%. This obviously meant a substantial widening of the ratio of value-added per head between non-agriculture and agriculture. In 1975, the value added per head in non-agriculture was 5.9 times higher than that in agriculture. By 1986, it was 10 times higher.

The widening gap between non-agriculture and agriculture was particularly rapid between 1980 and 1986. During this period, the prices of most of the major crops were on a downward trend. The export price of

3. This refers to the share of the workforce who have their main occupation in agriculture, and is based on data during the peak agricultural season.

TABLE 2
GDP AND EMPLOYMENT BY SECTOR

YEAR	1975	1980	1986
GDP (MILLIONS OF BAHT)	298,816	684,930	1,098,362
AGRICULTURE	94,063	173,806	183,037
NON-AGRICULTURE	204,753	511,124	915,325
SHARE			
AGRICULTURE	31.48%	25.38%	16.66%
NON-AGRICULTURE	68.52%	74.62%	83.34%
EMPLOYMENT (MILLIONS)	18.182	22.681	26.672
AGRICULTURE	13.270	16.092	17.803
NON-AGRICULTURE	4.912	6.589	8.870
SHARE			
AGRICULTURE	72.99%	70.95%	66.75%
NON-AGRICULTURE	27.01%	29.05%	33.25%
PER CAPITA GDP (BAHT/MONTH)	1,369.6	2,516.6	3,431.7
AGRICULTURE	590.7	900.1	856.8
NON-AGRICULTURE	3,474.0	6,464.7	8,599.9
RATIO NON-AG/AG	5.88	7.18	10.04

Source: NESDB, National Income of Thailand, and
NSO, Labour Force Surveys, various issues.

TABLE 3
MEAN PER CAPITA INCOME
AGRICULTURAL AND NON-AGRICULTURAL HOUSEHOLDS
(BAHT PER MONTH)

YEAR	AGRIC	NON-AGRIC	RATIO NON-AG/AG
1975/6	247	513	2.08
1981	503	1,154	2.29
1986	481	1,312	2.73

Source: NSO, Socioeconomic Surveys, 1975/6, 1981 and 1986.

rice declined on average by 7% per annum, that of rubber by 5.1% per annum and that of sugar by 9.1% per annum. The result was that the per capita GDP in agriculture actually declined in absolute terms (Table 2).

Because most agricultural households earn a significant part of their income from non-agricultural activities,[4] the disparity in per capita income between agricultural and non-agricultural households is not as large as the disparity in per capita GDP. Nevertheless, the difference is about two times, and has been widening along with the trend in per capita GDP. Table 3 shows that in 1975/6, the ratio of per capita income of non-agricultural households to that of agricultural households was 2.1. This increased to 2.7 in 1986. Also, during the period from 1981 to 1986, when crop prices were on a downward trend, nominal per capita income of agricultural households fell.

The disparity between agriculture and non-agriculture was obviously reflected in the disparity between the urban and rural areas. However, in the case of Thailand, the extreme primacy of the capital city, Bangkok, leads to big differences between the economic conditions in Bangkok and the rest of the country. Whereas the Bangkok region[5] contains 15.6% of the total population in 1985, it accounted for 45.5% of total GDP. 63.7% of the GDP from industry originates from the capital region. For the most dynamic exporting industries such as textiles and garments, the proportions originating from the Bangkok region rise to over 90%. Per capita GDP in Bangkok was more than 7 times higher than that for the Northeast (the poorest region), and was about 2.8 times higher than that for the Central region (the second richest region). In fact, taken by itself, the Bangkok region is already a NIC.

The sectorial and region disparities are reflected in the distribution of household income. Table 4 shows the shares of incomes received by various quintiles of households, with the top and bottom two deciles also separated out. Between 1975 and 1986, the income share of the richest 20% of households increased from 49.3% to 55.6%, while that of the poorest 20% of households declined from 6.0% to 4.5%. The shares of all quintile below the top quintile continually declined between 1975/6 and 1986. In fact, looking at the top two deciles, it can be seen that the second decile only made a slight gain. It was the top decile that increased its share of income substantially.

Between 1981 and 1986, apart from the worsening in the distribution of income, absolute poverty also increased. Because most of the population depended for their livelihood on agriculture, the decline in crop prices led to a large increase in the share of population living below the poverty line from 23% in 1981 to 29.5% in 1986 (see Table 5). As can be seen from the Table, this was a reversal of the excellent progress made in poverty alleviation since the late 1960's. In 1968/9, the percentage of the population living below the poverty line was 39%. This declined to only 23% in 1981, before increasing back rapidly to 29.5% in 1986.

After 1986, agricultural prices picked up substantially. This helped to reduce the poverty. The percentage of the population living below the poverty line declined to 25.2% in 1988. This was, however, still higher than the ratio under the poverty line in 1981. The income distribution situation since 1986 still shows a slight worsening trend. Although crop prices increased, the boom in manufactured exports also led to rapid increases in incomes of those in the urban areas, and particularly those in and around Bangkok, because most of the industries are located in such areas.

The worsening trend of poverty and income distribution between 1981 and 1986 were counteracted to some extent by the exchange rate policy discussed earlier, and also by the agricultural taxation policy.

---

4. In 1987, it was estimated that the agricultural households earned about 46% of their income from non-agricultural sources; see Sussangkarn, Tinakorn and Chongpeerapien [1988], table 5.6.

5. Including the 5 surrounding provinces.

TABLE 4
INCOME SHARE BY QUINTILE GROUPS OF POPULATION
(PERCENT OF TOTAL)

QUINTILE	1975/6	1981	1986
1st	49.3	51.5	55.6
- top 10%	33.4	35.4	39.1
- second 10%	15.9	16.1	16.5
2nd	21.0	20.6	19.9
3rd	14.0	13.4	12.1
4th	9.7	9.1	7.9
5th	6.0	5.4	4.5
- second bottom 10%	3.6	3.3	2.7
- bottom 10%	2.4	2.1	1.8

Source: NSO, Socioeconomic Surveys 1975/6, 1981 and 1985/6.

TABLE 5
POVERTY INCIDENCE
(PERCENT POPULATION BELOW POVERTY LINE)

	Whole Kingdom
1968/9	39.00
1975/6	30.02
1981	23.04
1986	29.51
1988	25.16

Source : Meesook [1979] and Hutaserani and Jitsuchon [1988].
Note : Figures up to 1986 are calculated from various Socioeconomic Surveys conducted by the NSO. 1988 figure was based on a TDRI simulation using the THAM2 model. Sanitary districts are classified as rural.

Devaluations in 1981 and 1984 generally led to increases in farm incomes compared to what they would have been without these devaluations. Although Thailand does have some market power in the major export crops such as paddy, econometric estimates generally find the foreign demand curve to be fairly elastic, and that devaluation would increase domestic farm incomes. Thailand has also had a long history of export taxation on rice.[6] This included export tax, rice premium and export quotas on rice exports. It has been estimated to imply a burden on the rice farmers verging on 30% of the foreign price of rice in 1980.[7] As rice prices fell on the world market, the rate of taxation gradually declined, and in 1986 all taxation on rice exports (explicit and implicit) were removed. This helped to keep domestic farm gate price from falling in line with world prices. Nevertheless, these policies could not reverse the trend of falling farm incomes and worsening inequality.

The problems of imbalance, poverty, and income distribution described above are clearly related to adjustments occurring in labour markets in response to structural changes on the production side. The next section will discuss the structure of the labour market in Thailand, and the relationship between the labour market and the structural imbalance and disparity issues outlined above.

4. LABOUR MARKETS AND STRUCTURAL ADJUSTMENTS

4.1 General Employment Situation

As mentioned above and indicated in Table 2, most of those employed in Thailand have their livelihood in agriculture. Currently, over 65% of all employed individuals have their main occupation in agriculture. Thus, in terms of the employment structure, Thailand is basically an agrarian society. As far as the employment situation is concerned, aggregate indicators do not reveal any serious employment problems. Open unemployment are generally very low, ranging around 1% of the workforce, although the rate appears to be on the rise (Figure 3), presumably partly due to the recession in the first part of the 1980's. The low open unemployment rates is not too surprising. Most people in Thailand work as either own-account or unpaid family workers, and mainly in agriculture. While the share of the own-account and unpaid family workers in total employment has been gradually falling (Table 6), in 1988 they still account for over 70% of all employed people. Thus, it is easy for most people to work for the family enterprise. Also, as with many other LDC's, there are many informal sector employment

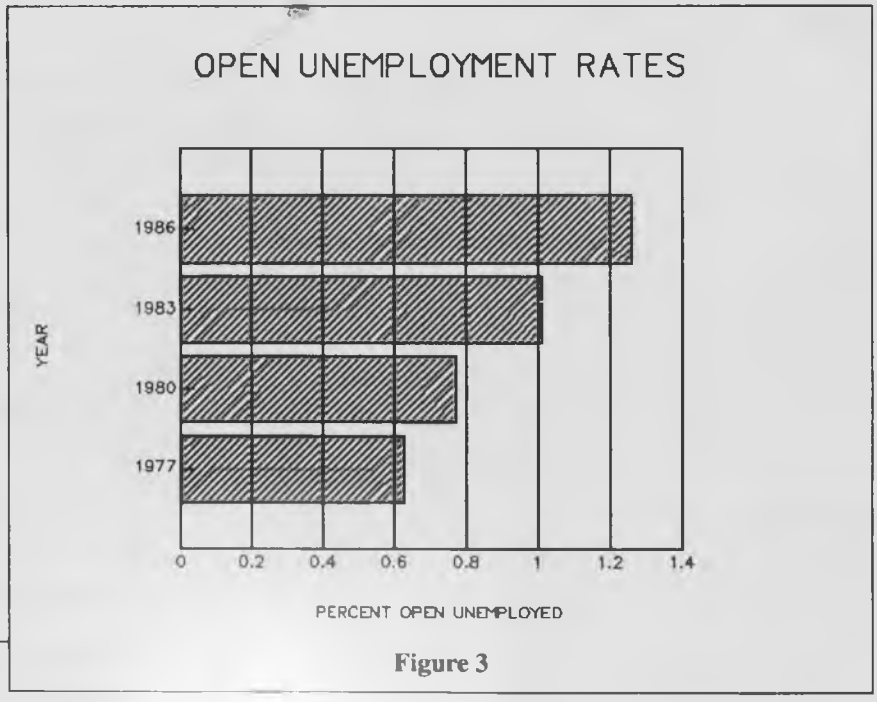


Figure 3

6. There are also smaller taxes on rubber, which is still present today.

7. See Siamwalla and Setboonsarng [1987].

TABLE 6
EMPLOYMENT BY WORKSTATUS: 1978-88

	1978	1983	1988
PUBLIC EMPLOYEES	1,020,528	1,780,834	1,839,900
PRIVATE EMPLOYEES	3,291,002	4,470,462	6,176,700
EMPLOYER	282,424	253,586	353,500
OWN-ACCOUNT	6,544,122	7,456,259	8,550,600
UNPAID	10,669,761	11,222,386	12,543,300
TOTAL	21,807,837	25,183,527	29,464,000

SHARES

	1978	1983	1988
PUBLIC EMPLOYEES	4.68%	7.07%	6.24%
PRIVATE EMPLOYEES	15.09%	17.75%	20.96%
EMPLOYER	1.30%	1.01%	1.20%
OWN-ACCOUNT	30.01%	29.61%	29.02%
UNPAID	48.93%	44.56%	42.57%
TOTAL	100.00%	100.00%	100.00%

Source: NSO, Labour Force Surveys, July-September.

TABLE 7
PERCENT OF EMPLOYED WORKING LESS THAN
20 HOURS PER WEEK
(JULY-SEPTEMBER)

	1977	1984
NORTH		
MUNI	1.69	0.65
NON-MUNI	1.63	1.55
NORTHEAST		
MUNI	2.05	1.57
NON-MUNI	6.2	0.65
SOUTH		
MUNI	3.8	0.94
NON-MUNI	7.49	3.49
CENTRAL		
MUNI	1.7	0.96
NON-MUNI	1.95	1.22
BANGKOK	1.07	0.76
WHOLE KINGDOM	3.97	1.27

Source: NSO, Labour Force Surveys, 1977 and 1984.

opportunities available, where barriers to entry are low, so that most of those who really want to work can find something to do.

Underemployment has also been generally low in Thailand. Table 7 shows that in 1977, about 4% of the employed workforce worked less than 20 hours per week. This percentage declined to on 1.3% in 1984. There were regional variations, but in no region was there a really serious problem of underemployment. The underemployed are almost equally divided between males and females, and over 80% of the underemployed are own-account workers or unpaid family workers. In fact, when asked whether they desired more work, about 64% of the underemployed stated that they did not want more work.[8]

4.2 Labour Market Problems and Structural Adjustment

There are 3 basic types of adjustment problems concerning the labour market.

a. The first is a short-term problem related to the seasonal nature of agricultural production. In the dry season, there is a lack of agricultural activities in non-irrigated parts of the country, and a very high proportion of the labour force becomes seasonally unemployed.

b. Problems concerning lags in labour movement in line with changes in the production structure. This leads to problems concerning sectorial and locational disparities.

c. Problems of mismatching of supply and demand by educational types. This is mostly relevant to the middle to upper educational levels.

A. Seasonal Unemployment

As most of those employed are dependent on agriculture, and work in agriculture has a seasonal nature, it is found that seasonal unemployment is a problem that afflicts a great number of people. Table 8 shows that between 3-5 millions people are seasonally unemployed each year.[9] The area worse afflicted is the Northeast, the poorest region, where over 30% of the workforce are seasonally unemployed. About 40% of the seasonally unemployed are own-account workers, who own their own farm, and who may not have real opportunities to find off-farm work during the dry season, particularly if this has to involve seasonal migration. Of the rest, most are unpaid family workers, and consists of the relatively young (14-24 years old), and also a large number of females.

A study by Bertrand and Squire [1980] suggested that most of the seasonally unemployed are voluntarily unemployed, with the younger workers and females drawn into the labour force to help in the peak season, and they voluntarily withdraw in the dry season. However, more recent examinations by Phongpaichit and Baker [1984] and Sussangkarn [1987] contradicted this view. The latter analyzed a special data set on seasonal migration and showed that most of the seasonal unemployed would like to find work in the dry seasons, and this was particularly true of the groups of the younger workers and the females. Many, however, are unable to find jobs, or do not know how to go about looking for seasonal migration jobs.

---

8. According to the Labour Force Survey, July-September 1984.

9. Recently, the numbers of seasonally unemployed have declined to around 3 millions each year.

TABLE 8
SEASONAL UNEMPLOYMENT NUMBERS AND RATES
(1977-1985)

LABOUR FORCE SURVEY 1977 ROUND 1

	NORTH	NORTH-EAST	SOUTH	CENTRAL	TOTAL
SEASONAL UNEMPLOYMENT	1,065,740	2,306,910	53,660	537,310	3,963,620
SEASONAL RATE	24.51%	30.32%	2.34%	13.78%	21.84%

LABOUR FORCE SURVEY 1978 ROUND 1

SEASONAL UNEMPLOYMENT	863,930	2,673,870	38,850	445,410	4,022,060
SEASONAL RATE	19.55%	35.20%	1.54%	11.09%	21.68%

LABOUR FORCE SURVEY 1979 ROUND 1

SEASONAL UNEMPLOYMENT	985,570	2,823,780	128,080	431,890	4,369,320
SEASONAL RATE	21.60%	36.18%	5.38%	10.86%	23.34%

LABOUR FORCE SURVEY 1981 ROUND 1

					TOTAL
SEASONAL UNEMPLOYMENT	1,497,200	3,274,970	48,440	749,980	5,570,590
SEASONAL RATE	28.98%	39.48%	3.01%	16.48%	28.39%

LABOUR FORCE SURVEY 1982 ROUND 1

					TOTAL
SEASONAL UNEMPLOYMENT	1,482,030	3,442,910	71,470	460,620	5,457,030
SEASONAL RATE	27.35%	40.13%	2.57%	9.75%	25.38%

LABOUR FORCE SURVEY 1983 ROUND 1

					TOTAL
SEASONAL UNEMPLOYMENT	992,420	2,775,220	75,320	573,810	4,416,770
SEASONAL RATE	20.05%	35.90%	2.89%	13.00%	22.42%

LABOUR FORCE SURVEY 1984 ROUND 1

					TOTAL
SEASONAL UNEMPLOYMENT	675,410	2,770,270	77,880	244,020	3,767,580
SEASONAL RATE	12.79%	33.26%	2.87%	5.37%	18.05%

LABOUR FORCE SURVEY 1985 ROUND 1

					TOTAL
SEASONAL UNEMPLOYMENT	946,680	2,771,820	121,390	348,620	4,188,510
SEASONAL RATE	17.41%	31.47%	4.29%	7.24%	19.14%

SOURCE: Labour Force Surveys, NSO.

TABLE 9
AGRICULTURAL INDICATORS
(SELECTED ASIAN COUNTRIES)

COUNTRY	(a) PERCENT LAB.FORCE IN AGRIC (1980)	(b) AGRIC SHARE IN GDP (1982)	RATIO (b/a)
BANGLADESH	75	47	.63
BURMA	53	48	.90
CHINA	74	37	.50
INDIA	70	33	.47
INDONESIA	57	26	.46
KOREA,REP	36	16	.44
MALAYSIA	23	23	1.00
PAKISTAN	55	31	.56
PHILIPPINES	52	22	.42
SRI LANKA	53	27	.51
THAILAND	71	22	.28

Source: IBRD World Development Report, various issues.

Because of the sizable nature of the seasonal unemployment problem, it is an important problem for the rural population. The problem is, however, intrinsically tied to the seasonal nature of agricultural activities. The situation will depend on changes in the cropping pattern in agriculture, as different crops require different amounts of labour at various times of the year. It will also depend on possibilities for further extending irrigation into currently rain-fed areas.

B. Labour Movement and Changing Production Structure

As earlier discussed, an important adjustment problem is the lack of balance between the sectorial and location distribution of production and of employment. This has led to growing disparities between agriculture and non-agriculture and between regions in the country. The case of Thailand seems somewhat unusual when compared to other countries. Comparing the ratio of the share of employment in agriculture to the share of agriculture in GDP for a number of countries, Thailand stands out as having one of the highest ratio (Table 9). This ratio indicates the difference between the value added per head in agriculture and non-agriculture, as is a rough indicator of the disparity between agriculture and non-agriculture.

Part of the explanation for the very large ratio of the share of employment in agriculture to the share of agriculture in GDP may be because many of those who have their main occupations in agriculture also work

in non-agricultural occupations through out the year, particularly in the off-season.[10] While this may be true to some extent, it is unlikely to be the main explanation of the very high ratio in Thailand compared to other countries. First, those engaged in agriculture in other countries are also likely to be engaged in non-agricultural occupations as well. Second, the availability of non-agricultural opportunities are not abundant everywhere, as evidenced by severe seasonal unemployment problems in many parts of the country. Further, the comparison of incomes of agricultural and non-agricultural households in Table 3 above includes household incomes from all sources, and this shows agricultural households falling behind non-agricultural household in line with widening value added per head between agriculture and non-agriculture.

There appears to be two main reasons why there is such a difference between the ratio of employment in agriculture and the share of agriculture in GDP in Thailand. The first is the past ready availability of forest areas which could be converted to arable land. This was the main destination for migrants from the rural areas in response to the population pressure up until about 1980. Instead of migrating to the urban areas, rural migrants would go to the forest areas (often illegally), and settled down to cultivate the land, and in effect took ownership. The main migration pattern in the 60's and 70's was rural-rural. As a result one found that up until the late 1970's, the rate of expansion of cultivated area in Thailand was between 3-4% per annum (Figure 4), and was in fact greater than the rate of population growth in the rural areas. The land/man ratio in agriculture had actually been increasing up until the late 1970's.

A second reason is the very high proportion of farm households who are owner cultivators in Thailand. In 1981, data from the socioeconomic survey give the proportion as 83.3% of all farm households.[11] This is likely to be a factor working against large scale migration into the urban areas. It is likely that the market for the sales and purchases of land in the rural areas is thin, and thus owner cultivators who wish to sell their land and migrate to the urban areas may only get rather low prices for their land. This would increase the opportunity cost of migration. Migration from self-cultivating households would therefore be limited to a few family members such as sons or daughters, and may be circulatory in nature, rather than a wholesale movement of all the family members.

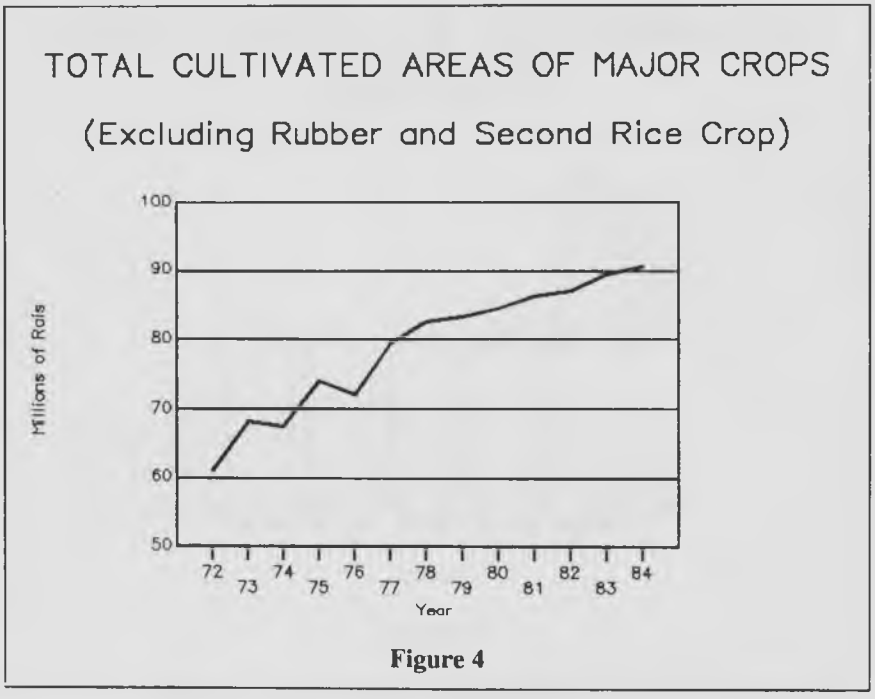


Figure 4

10. This was already indicated above.
11. NSO, Socioeconomic Survey 1981.

A factor which would reinforce the above reason is that many of the so called "owner cultivator" in fact do not have full land titles. The migrants who went into the forest areas to open up new land were actually taking possession of the land illegally. They went into the reserved forest areas, while the authorities did not really try to enforce the law. The result is that about 30% of private land in Thailand have no formal legal documents. This will make it even more costly for a farmer to abandon the land and migrate out off the rural areas.[12]

Up until about the end of the 1970's, it was logical that many farmers migrated to open up new agricultural land. Plenty of land were still available in the forest areas.[13] Further, crop prices were high and rising. The rural-rural migration path was probably the best choice for the rural population. First, once they migrated, they end up doing the thing they know how to do well, i.e. agricultural cultivation. Second, the move also appeared to increase their asset, because it seem that they have possession of the land.

The problem is that once crop prices started to decline in the early 1980's, it was difficult for the farmers to move out off agriculture. Those who legally own their land may face large opportunity costs in selling their land and moving to the urban areas, due to the thin land market. Those who have no legal title to the land will get even lower prices for their land, and hence face a very high opportunity cost.

The high opportunity cost faced by the farmers were they to migrate into the urban areas leads to long lags in the adjustment of the employment structure to the production structure. However, some adjustments have been occurring, and the pace of adjustment is likely to be accelerating, given the rapid industrialization that is taking place in Thailand at the present time. The benefits to be had in migrating to the urban areas where there are rapidly growing demand for semi-skilled workers are getting larger and larger. Data on the rate of growth of the urban population show clearly that rural-urban migration has been increasing since 1980. Between 1960 and 1980, the growth of the urban population has been remarkably steady at about 3.5% per annum. Between 1980 and 1985 however, the rate jumped to 6.6% per annum (Figure 5). This was the time when crop prices were falling, and also when the availability of new land for agricultural expansion became very limited. Thus, there are clearly labour market responses to changes on the production

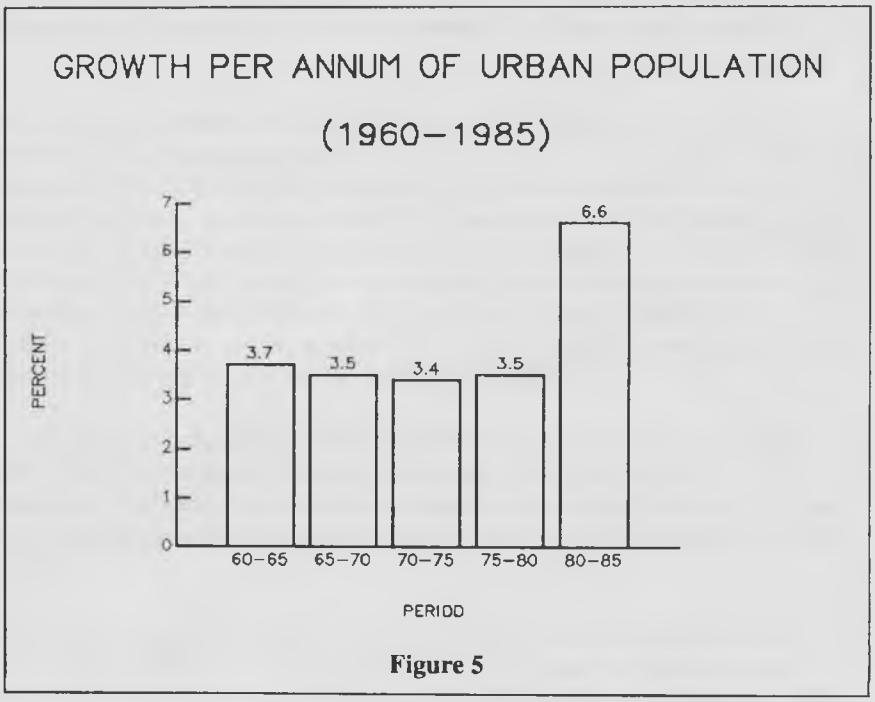


Figure 5

12. For an analysis of the impact land titles see Chalamwong and Feder [1988].

13. Subject to non-enforcement by the authorities.

side. However, the responses could not keep pace with changes that were occurring in the production structure. This led to problems of imbalances and income disparities discussed earlier.

The current industrial boom will likely lead to even more rapid urban growth. While reason migration data are not very complete,[14] it is likely that migration rates into areas in and around Bangkok have accelerated. If Thailand can maintain the pace of growth anywhere resembling the past pattern of growth experiences by the Asian NIC's, population movements out off agriculture and into the urban areas are likely to be the key demographic transition over the medium to long term in Thailand.

C. Demand Supply Mismatching of Educated Manpower

While the over all open unemployment rate in Thailand is very low, generally the rates of educated open unemployment are quite high, particularly at the vocational level. This was an important problem around the mid 1980's, and was related to the cutback in government employment growth to 2% per annum as indicated earlier. Currently, however, due to the economic boom, the problem of educated open unemployment is much less severe, and instead the problem of shortages of engineering and scientific manpower has become important. These problems of mismatching of demand and supply of educated manpower relates to structural changes on the demand side, the functioning of the labour market, and the education system.

Table 10 shows that the open unemployment rate of those with primary education or below was about half of a percent in 1984 and 1986. At the vocational level, however, the rate was over 10% in both years. At the other levels, the rates were around 3-4%. Up until the economic boom which started after 1986, the number of educated openly unemployed had been increasing rapidly. The two groups with the highest growth of open unemployment were those with university education (averaging 14.3% per annum between 1977 and 1986), and vocational education (averaging 22.7% per annum), which was the group with the most serious open unemployment problem. It had the highest open unemployment rate, and also the fastest growth in the numbers openly unemployed. In 1986, the number of unemployed with vocational education was about equal to the sum of the unemployed with secondary, university, and teacher training combined.

There were four basic reasons why the educated open unemployment problem has been getting worse over the first part of the 1980's. First, the supply of the better educated workforce had been rising rapidly. Since 1980, workers with university and vocational education have been increasing at about 15% per annum. This was much faster than the overall growth in the labour force. Social demand for education at the higher levels had been growing rapidly.

Second, there was a fundamental change in the main source of demand for the better educated workers. Up until about 1983-4, the main absorber of the better educated workers was the public sector. Figure 6 shows the importance of the government for the employment of the better educated (based on 1984 data). For those with less than completed primary education (Pratom 4), the proportion in government employment was only about half of a percent. For completed primary education, the proportion was still low at 2.1%. The importance of the public sector increased rapidly for higher levels of education. 22.1% of all workers with secondary education were employed by the government. This increased to 41.4% for vocational education, 56.3% for university education, and 84% for teachers.[15]

---

14. This will have to wait for the 1990 Census.

15. The latter is not very surprising, as the government is the main source of supply of education.

TABLE 10
OPEN UNEMPLOYMENT RATES BY EDUCATION: 1984-1988

	1984	1986	1988
PRIMARY AND BELOW	0.42%	0.56%	0.38%
SECONDARY	3.19%	3.55%	2.47%
VOCATIONAL	10.22%	10.86%	5.31%
UNIVERSITY	4.19%	4.58%	2.87%
TEACHER TRAINING	3.19%	3.96%	1.62%
TOTAL	0.97%	1.26%	0.83%

Source: NSO, Labour Force Surveys, July-September.

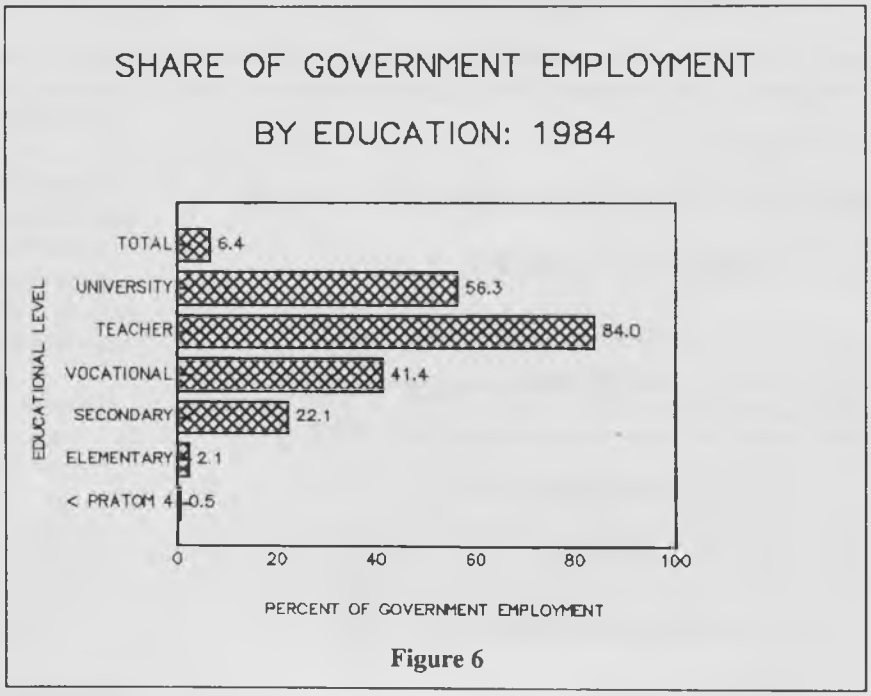


Figure 6

From the mid 1970's to about 1984, government employment growth amounted to about 10% per annum. This was faster than the growth in the size of the private employees, or the numbers of own-account and unpaid family workers. The high government employment growth created much needed jobs for the rapidly increasing pool of workers with relatively high levels of education. While this did not slow down the growth in educated open unemployment completely, it helped to contain the problem substantially. However, as part of the structural adjustment policies taken in the early part of the 1980's, in about 1983-4, there was a dramatic cutback in the growth of government employment to only 2% per annum. As discussed in section 2, the early to mid 80's was a period when the saving-investment gap and the rapidly rising foreign debt burden were important issues for Thailand. As civil service salaries were taking up more and more of the budget,[16] the government had to control the rise in this expenditure item, and therefore imposed an upper limit on civil service growth to 2% per annum, a limit which is still in existence for most parts of the civil service today. The consequence was that the educated workers could no longer rely on the public sector as the main absorber of the supply.

The third reason for rising open educated unemployment is that the education system cannot respond quickly to changing needs in the labour market. The skill mix required by the civil service was very different to that required for private sector employment. Even with the current economic boom, there is an over supply of graduates in the humanities, social and political sciences, while at the same time there is a severe shortage in the more technical and scientific disciplines (see below). The education system is mostly public and highly bureaucratic, and it is very difficult to reduce the size of any department even though there are clear needs to reallocate resources among disciplines to keep up with changing labour market needs.

The fourth reason has to do with the structure of the labour market. Previous analyses of the labour market points to the existence of labour market segmentation, with wages not fully responsive to demand and supply (Sussangkarn [1987]). Relative wage data by educational levels (Figure 7) did not reveal any clear falling trend in the relative wage of the vocational and university groups, even though their open unemployment rates had been rising most rapidly. Econometric estimations of a segmented labour market model revealed high wage differentials between the "formal" sector, consisting of the public sector and the large private firms, and the "informal sector", and the better educated find it more worthwhile to be unemployed and wait for an opening in the formal sector rather than go and work in the informal sector.

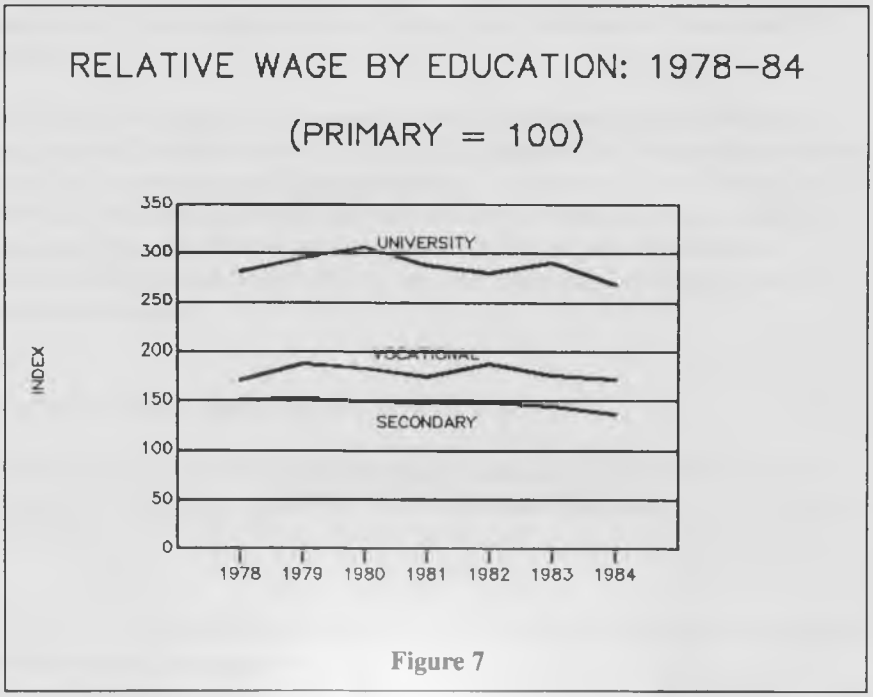


Figure 7

16. In 1984, almost 48% of all government revenues had to be used to the pay salaries of civil servants.

The above study found that returns to education above the primary level were zero or almost zero in the informal sector, while there were large returns to education in the formal sector. Thus, the wage differential between the formal and informal sector increased with the level of education. For a male non-migrant private employee in Bangkok age 35 years old, the estimates predicted a small formal-informal wage differential at the primary educational level. This differential rose to over 400% for those with university education.

Given the high formal-informal wage differential for the better educated, they find it worthwhile to wait for an opening in the formal sector rather than go and work in the informal sector. Of course, some may go and work in the informal sector. However, many may look down on the work in the informal sector as being of low status. In fact, as the level of education increased the proportion found in formal sector employment also went up quickly. In 1988 it was estimated that for those with primary education and below, only 6.6% worked in the formal sector. The ratio quickly rose to 31.6% and 35.5% for those with lower and upper secondary education. For those with vocational education, it was 63.2%, and the ratio reached 88.4% for those with university education. Further, most of the educated unemployed came from relatively well off families, who could finance their periods of unemployment.

Recently, with the economy experiencing double digit growths, the situation in the labour market is changing rapidly. As seen in Table 10, by 1988 the open unemployment problem for the better educated had improved tremendously. The open unemployment rate of the vocational group had almost halved from the rate in 1986. A different type of problem has emerged. There is now a severe shortage of scientific and technical manpower (especially engineers) at the bachelor degree level and above (see Table 11 for estimates at the bachelor degree level). Wages of these types of workers have increased rapidly. The larger private firms are bidding workers away from the public sector, and the small and medium size private firms. The situation is unlikely to get better for some time, given the continual increase in foreign direct investment from countries such as Japan, Hong Kong, and Taiwan.

At the vocational level, however, the technical manpower situation is still one with general excess supply, although there are shortages in specific industrial fields. Part of the reason is that many of the booming industries appear to rely more on semi-skilled workers with general training. Another reason is the quality of output at the vocational level. There are insufficient coordination between the vocational schools, which are mostly public, and the private companies. The machineries that are used to teach vocational students are mostly outdated, and the schools do not have enough resources to update the equipment to keep up with the rapidly changing industrial and technical structures.

5. ADJUSTMENT ISSUES FOR THE FUTURE

The policy focus for the future should be to maintain the pace of economic growth while ensuring better sharing of the benefits from growth among the population. In order to reach this goal, several problems concerning human resources and the labour market have to be tackled in line with expected changes in the production structure.

1. The expected rapid growth in rural-urban migration has to be anticipated and planned. Already Bangkok is highly congested, and the necessary infrastructures lag far behind the real needs. Currently, the Eastern Seaboard region appears to be developing rapidly. This will help to divert some of the industrial

TABLE 11
PROJECTED EXCESS SUPPLY OF ENGINEERS BY FIELDS
(PERSON)

		1988	1989	1990	1991	1996
BACHELOR DEGREE						
	E1	(78)	(80)	(61)	(39)	91
	E2	(515)	(541)	(428)	(326)	391
TOTAL E		(593)	(622)	(489)	(366)	482
	M1	(1,285)	(1,400)	(1,277)	(1,279)	(1,277)
	M2	23	36	59	84	245
TOTAL M		(1,262)	(1,364)	(1,217)	(1,195)	(1,032)
	T1	(88)	(156)	131	365	1,386
	T2	(225)	(245)	(227)	(218)	(185)
	T3	(346)	(430)	(411)	(429)	(526)
TOTAL T		(659)	(831)	(507)	(282)	674

Source: TDRI/NESDB (1989).
Note: Meanings of the Codes

E. Electronics Technology
- E1 - Computer science, including computer engineering.
- E2 - Electrical engineering, including electrical, electronic and communications engineering.

M. Material Technology
- M1 - Mechanical engineering.
- M2 - Metallurgy, including material science and mining engineering.

T. Related Technology
- T1 - Other engineering, including civil engineering, sanitary engineering, survey engineering, agriculture and irrigation engineering, and other engineering disciplines not covered under E, M, T2 or T3.
- T2 - Chemical engineering.
- T3 - Industrial engineering.

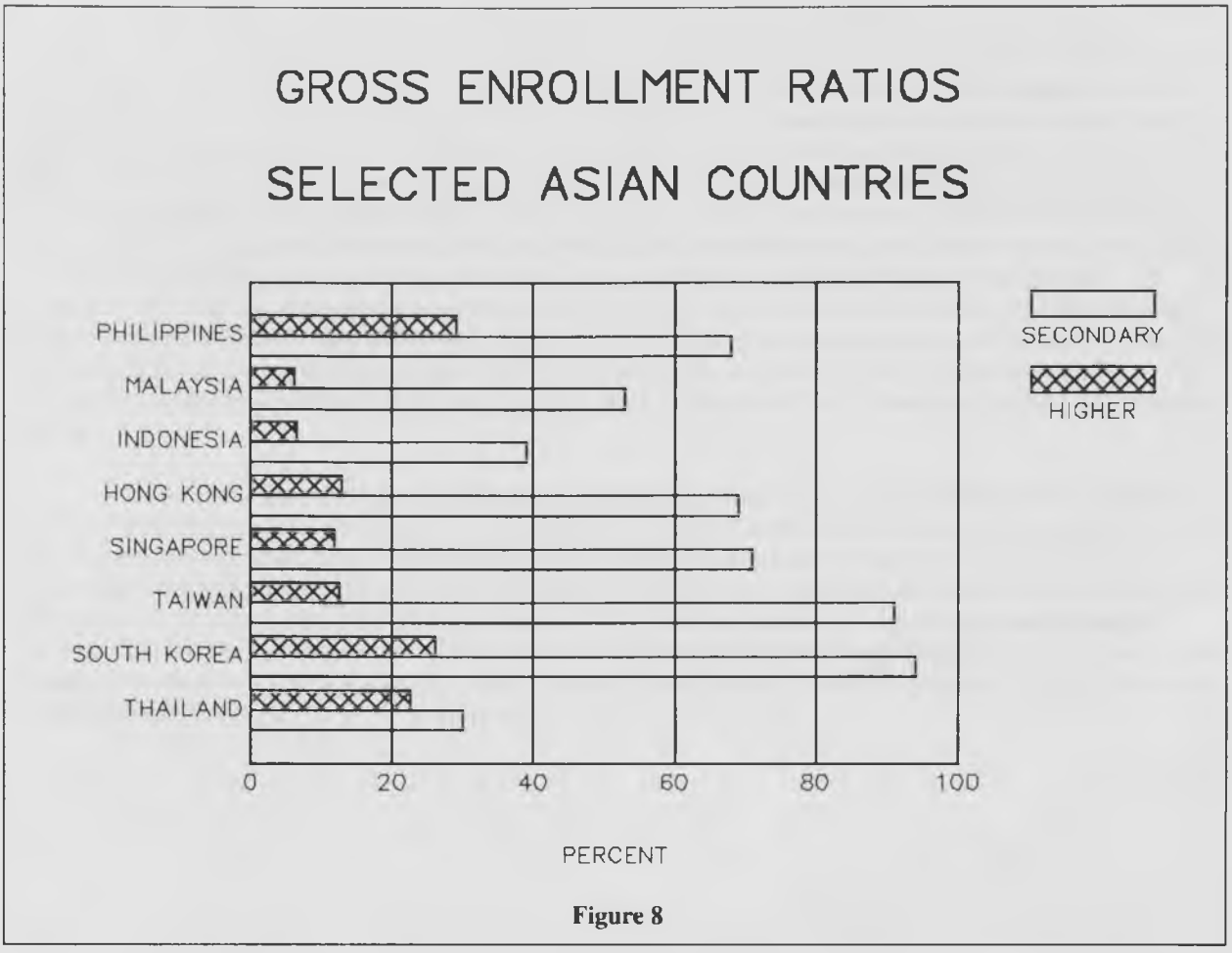


Figure 8

expansion and population movement away from the surrounding areas of Bangkok.[17] The urban centers in the Eastern Seaboard region needs careful management and planning, however. One does not want to repeat the chaos and congestion in Bangkok at the Eastern Seaboard area. Already, the social infrastructures (schools, hospitals, etc.) are lagging the population movement into the Eastern Seaboard region.

2. Whereas Thailand has a ready supply of relatively cheap labour available, and this will remain so for sometime, most of these workers have just primary education. In Thailand, more than half of those who finished the 6 years of compulsory education drop out off the formal education system. Currently, 75% of the workforce have just primary education. The gross enrollment ratio at the secondary level is only 30%. This is very low when compared to the Asian NIC's, and also lower than many countries in the region, who are likely to be Thailand's main competitors in the future (Figure 8).

17. The Eastern Seaboard region is and area between Chonburi and Rayong, which are located between 100-200 kilometers from Bangkok.

For the future, Thailand needs to upgrade the technological and skill base of its industries and services.[18] This will require workers with more than just primary education. Recent evidence indicated that the more modern manufacturing industries, which are behind the current accelerated growth, demand more and more workers with more than just primary education. Because of the low enrollment at the secondary level, it is likely that the market for workers with more than primary education will begin to get tight over the next few years. When this happens, the basic wages of the modern manufacturing sector will begin to rise rapidly, and Thailand's competitiveness will be eroded. This will happen in spite of the fact that Thailand will still have a large pool of low wage, and low income workers with just primary education. Such a development may affect both the sustainability of the current growth trend, and also lead to undesirable income distribution consequences, because the majority of workers with just primary education will continue to fall further and further behind those with better education. Policies are needed to increase secondary enrollment in a way that will not impose too much burden on those who are already poor, and also to develop effective training programs to upgrade the skills of those with just primary education who are no longer in the formal education system.

3. At the higher education level, the education system needs to be made more flexible to respond better to the skill requirements from the labour market. Fields of study which produce excess supply of workers need to be trimmed, while those with shortages need to be allocated more resources to expand. Private universities and colleges need to be given more flexibility, and more cooperation are needed between the public sector and the private sector to develop programs of study that will meet with requirements in the labour market. The future is one where the public supply of education (which will continue to be the dominant source of supply for sometime) need to cater to requirements for employment in the private sector, rather than mostly to employment in the public sector as in the past.

18. This will be true in agriculture also, where there are now diversifications into more higher value added products, such as fruits, vegetable, and aqua-culture. These products generally require more skill and knowledge to get the best results.

REFERENCES

Bertrand, T.J. and L. Squire [1980]; "The Relevance of the Dual Economy Model: A Case Study of Thailand," Oxford Economic Papers.

Chalamwong, Yongyuth and Gershon Feder [1988]; "The Impact of Landownership Security: Theory and Evidence from Thailand," The World Bank Economic Review, May.

Hutaserani, S. and S. Jitsuchon [1988]; "Thailand's Income Distribution and Poverty Profile and Their current Situation," paper presented at the 1988 TDRI Year-end Conference on Income Distribution and Long-term Development, December.

Meesook, Oey Astra [1979]; "Income, Consumption and Poverty in Thailand, 1962/63 to 1975/76," World Bank staff working paper No.364, November.

Phongpaichit, P. and C.J. Baker [1984]; "Bertrand's Choice and Seasonal Unemployment Reconsidered," Mimeo, Faculty of Economics, Chulalongkorn University.

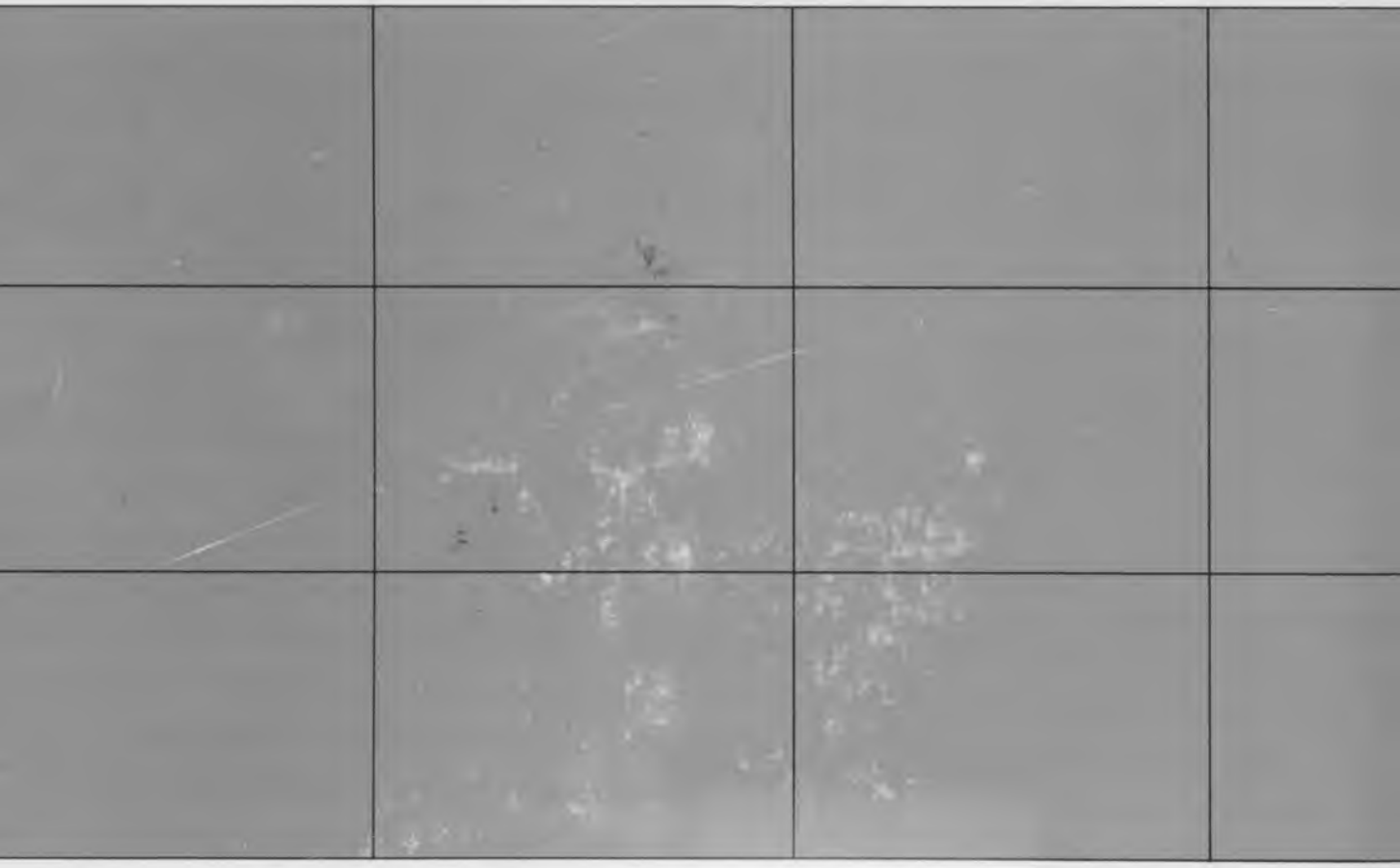
Sahasakul, C., N. Thongpakde and K. Kraisoraphong [1989]; "Lessons from the World Bank's Experience of Structural Adjustment Loans (SALs): A Case Study of Thailand," Thailand Development Research Institute, May 1989.

Siamwalla, Ammar and Suthad Setboonsarng [1987]; "Agricultural Pricing Policies in Thailand: 1960-1985," Agriculture and Rural Development Program, Thailand Development Research Institute, October.

Sussangkarn, Chalongphob [1987]; "The Thai Labour Market: A Study of Seasonality and Segmentation," Paper presented at the International Conference on Thai Studies, Australian National University, Canberra.

Sussangkarn, Chalongphob, Pranee Tinakorn and Tienchai Chongpeerapien [1988]; "The Tax Structure in Thailand and Its Distributional Implications," Paper presented at the TDRI Year-end Conference, Cha-am, December.

TDRI/NESDB [1989]; "S&T Manpower Situation: An Update," Human Resources and Social Development Program, TDRI, and Human Resources Planning Division, NESDB, June.



Rajapark Building, 163 Asoke, Sukhumvit Road, Bangkok 10110 Thailand

Tel. 258-9012-7, 258-9027-9 Fax. 258-9046 Telex 20666 Rajapak TH